

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY  
(PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/CA2004/000437

International filing date (day/month/year)  
24.03.2004

Priority date (day/month/year)  
25.03.2003

International Patent Classification (IPC) or both national classification and IPC  
H01M8/02, B23K11/00, B23K20/00, B29C65/44, B29C65/64, C09J5/06

Applicant  
I.E. DU PONT CANADA COMPANY

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITYInternational application No.  
PCT/CA2004/000437

JC20 Rec'd PCT/PTO 21 SEP 2005

## Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in computer readable form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

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**Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	
	No: Claims	1, 2, 8, 9, 12, 14-18
Inventive step (IS)	Yes: Claims	
	No: Claims	1-22
Industrial applicability (IA)	Yes: Claims	1-22
	No: Claims	

**2. Citations and explanations**

**see separate sheet**



WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)

International application No.

PCT/CA2004/000437

Re Item V.

JC20 Rec'd PCT/PTO 21 SEP 2005

1 Reference is made to the following documents:

D1 : GB 2 326 017 A (\* MOTOROLA INC) 9 December 1998 (1998-12-09)

D2 : US 5 733 678 A (LEDJEFF ET AL) 31 March 1998 (1998-03-31)

2 LACK OF NOVELTY

2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D1 discloses (the references in parentheses applying to this document):

A process for joining a gas diffusion layer to a separator plate of an electrochemical cell (page 6, line 4-7), wherein the gas diffusion layer comprises a porous body (page 1, line 29-31), and the separator plate comprises at least one landing surface formed on a surface of the separator plate (see Figure 3), and the separator plate and landing surface comprising a polymer and conductive filler (page 5, line 15-25), the process comprising the step of welding the landing surface to the gas diffusion layer by impregnating some of the polymer on the landing surface within a portion of the porous body (page 6, line 4-13).

Therefore the subject-matter of **claim 1** is not new.

2.2 The same considerations as made in the above paragraph regarding claim 1 are also valid for independent claims 17 and 18 since claim 17 and 18 are based on the same basic principle as claim 1 in terms of an electrochemical cell component or electrochemical cell respectively. The subject-matter of **claims 17 and 18** is therefore not new.

2.2 Furthermore, dependent **claims 2-16 and 19-22** do not contain any additional features which, in combination with the features of any claim to which they refer, are new or involve an inventive step for the reason that the subject-matter of said claims is either directly derivable from the disclosure of document D1 (for claims 12, 14, 15;



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International application No.

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16, see respectively page 5, line 15-19; page 4, line 31 - page 5, line 3 and page 6, line 14-28) or from a similar application described in document D2 (for claims 2, 8, 9: see column 8, line 57 - column 9, line 8), or represents simple design details which are generally known to the person skilled in the field of fuel cells (claims 3-7, 10, 11, 13 and 19-22).